

#3

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<110> Yu et al.
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<141> 2000-02-22
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<170> PatentIn Ver. 2.1

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ccaaccttca aagttcaagt agtgat atg gat gac tcc aca gaa agg gag cag 173
Met Asp Asp Ser Thr Glu Arg Glu Gln

1

5

tca cgc ctt act tct tgc ctt aag aaa aga gaa gaa atg aaa ctg aag 221
Ser Arg Leu Thr Ser Cys Leu Lys Lys Arg Glu Glu Met Lys Leu Lys
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gag tgt gtt tcc atc ctc cca cgt aag gaa agc ccc tct gtc cga tcc 269
Glu Cys Val Ser Ile Leu Pro Arg Lys Glu Ser Pro Ser Val Arg Ser
30 35 40

tcc aaa gac gga aag ctg ctg gct gca acc ttg ctg ctg gca ctg ctg 317
Ser Lys Asp Gly Lys Leu Leu Ala Ala Thr Leu Leu Leu Ala Leu Leu
45 50 55

tct tgc tgc ctc acg gtg gtg tct ttc tac cag gtg gcc gcc ctg caa 365
Ser Cys Cys Leu Thr Val Val Ser Phe Tyr Gln Val Ala Ala Leu Gln
60 65 70

ggg gac ctg gcc agc ctc cgg gca gag ctg cag ggc cac cac gcg gag 413
Gly Asp Leu Ala Ser Leu Arg Ala Glu Leu Gln Gly His His Ala Glu
75 80 85

aag ctg cca gca gga gca gga gcc ccc aag gcc ggc ctg gag gaa gct 461
Lys Leu Pro Ala Gly Ala Gly Ala Pro Lys Ala Gly Leu Glu Glu Ala
90 95 100 105

cca gct gtc acc gcg gga ctg aaa atc ttt gaa cca cca gct cca gga 509
Pro Ala Val Thr Ala Gly Leu Lys Ile Phe Glu Pro Pro Ala Pro Gly
110 115 120

gaa ggc aac tcc agt cag aac agc aga aat aag cgt gcc gtt cag ggt 557
Glu Gly Asn Ser Ser Gln Asn Ser Arg Asn Lys Arg Ala Val Gln Gly
125 130 135

cca gaa gaa aca gtc act caa gac tgc ttg caa ctg att gca gac agt 605
Pro Glu Glu Thr Val Thr Gln Asp Cys Leu Gln Leu Ile Ala Asp Ser
140 145 150

~~gaa aca cca act ata caa aaa gga tct tac aca ttt gtt cca tgg ctt 653
 Glu Thr Pro Thr Ile Gln Lys Gly Ser Tyr Thr Phe Val Pro Trp Leu
 155 160 165
 ctc agc ttt aaa agg gga agt gcc cta gaa gaa aaa gag aat aaa ata 701
 Leu Ser Phe Lys Arg Gly Ser Ala Leu Glu Glu Lys Glu Asn Lys Ile
 170 175 180 185
 ttg gtc aaa gaa act ggt tac ttt ttt ata tat ggt cag gtt tta tat 749
 Leu Val Lys Glu Thr Gly Tyr Phe Phe Ile Tyr Gly Gln Val Leu Tyr
 190 195 200
 act gat aag acc tac gcc atg gga cat cta att cag agg aag aag gtc 797
 Thr Asp Lys Thr Tyr Ala Met Gly His Leu Ile Gln Arg Lys Lys Val
 205 210 215
 cat gtc ttt ggg gat gaa ttg agt ctg gtg act ttg ttt cga tgt att 845
 His Val Phe Gly Asp Glu Leu Ser Leu Val Thr Leu Phe Arg Cys Ile
 220 225 230
 caa aat atg cct gaa aca cta ccc aat aat tcc tgc tat tca gct ggc 893
 Gln Asn Met Pro Glu Thr Leu Pro Asn Asn Ser Cys Tyr Ser Ala Gly
 235 240 245
 att gca aaa ctg gaa gaa gga gat gaa ctc caa ctt gca ata cca aga 941
 Ile Ala Lys Leu Glu Glu Gly Asp Glu Leu Gln Leu Ala Ile Pro Arg
 250 255 260 265
 gaa aat gca caa ata tca ctg gat gga gat gtc aca ttt ttt ggt gca 989
 Glu Asn Ala Gln Ile Ser Leu Asp Gly Asp Val Thr Phe Phe Gly Ala
 270 275 280
 ttg aaa ctg ctg tgacctactt acaccatgtc tctagctatt ttctctccctt 1041
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 35 40 45
 Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
 50 55 60
 Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg
 65 70 75 80

Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly
 85 90 95
 Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu
 100 105 110
 Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn
 115 120 125
 Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Val Thr Gln
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 Asp Cys Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys
 145 150 155 160
 Gly Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser
 165 170 175
 Ala Leu Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr
 180 185 190
 Phe Phe Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met
 195 200 205
 Gly His Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu
 210 215 220
 Ser Leu Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu
 225 230 235 240
 Pro Asn Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly
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 35 40 45
 Cys Leu Leu His Phe Gly Val Ile Gly Pro Gln Arg Glu Glu Phe Pro
 50 55 60
 Arg Asp Leu Ser Leu Ile Ser Pro Leu Ala Gln Ala Val Arg Ser Ser

Val Val Phe Ser Gly Lys Ala Tyr Ser Pro Lys Ala Thr Ser Ser Pro
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 Leu Tyr Leu Ala His Glu Val Gln Leu Phe Ser Ser Gln Tyr Pro Phe
 130 135 140
 His Val Pro Leu Leu Ser Ser Gln Lys Met Val Tyr Pro Gly Leu Gln
 145 150 155 160
 Glu Pro Trp Leu His Ser Met Tyr His Gly Ala Ala Phe Gln Leu Thr
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 35 40 45
 Gln Asp Gln Gly Gly Leu Val Thr Glu Thr Ala Asp Pro Gly Ala Gln
 50 55 60
 Ala Gln Gln Gly Leu Gly Phe Gln Lys Leu Pro Glu Glu Glu Pro Glu
 65 70 75 80
 Thr Asp Leu Ser Pro Gly Leu Pro Ala Ala His Leu Ile Gly Ala Pro
 85 90 95
 Leu Lys Gly Gln Gly Leu Gly Trp Glu Thr Thr Lys Glu Gln Ala Phe
 100 105 110
 Leu Thr Ser Gly Thr Gln Phe Ser Asp Ala Glu Gly Leu Ala Leu Pro
 115 120 125
 Gln Asp Gly Leu Tyr Tyr Leu Tyr Cys Leu Val Gly Tyr Arg Gly Arg
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 Ala Pro Pro Gly Gly Gly Asp Pro Gln Gly Arg Ser Val Thr Leu Arg
 145 150 155 160
 Ser Ser Leu Tyr Arg Ala Gly Gly Ala Tyr Gly Pro Gly Thr Pro Glu
 165 170 175
 Leu Leu Leu Glu Gly Ala Glu Thr Val Thr Pro Val Leu Asp Pro Ala
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Arg Arg Gln Gly Tyr Gly Pro Leu Trp Tyr Thr Ser Val Gly Phe Gly
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 a, t, g, or c

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 35 40 45

Pro Pro Pro Pro Pro Leu Pro Pro Pro Pro Pro Pro Pro Leu Pro
 50 55 60

Pro Leu Pro Leu Pro Pro Leu Lys Lys Arg Gly Asn His Ser Thr Gly
 65 70 75 80

Leu Cys Leu Leu Val Met Phe Phe Met Val Leu Val Ala Leu Val Gly
 85 90 95

Leu Gly Leu Gly Met Phe Gln Leu Phe His Leu Gln Lys Glu Leu Ala
 100 105 110

Glu Leu Arg Glu Ser Thr Ser Gln Met His Thr Ala Ser Ser Leu Glu
 115 120 125

Lys Gln Ile Gly His Pro Ser Pro Pro Pro Glu Lys Lys Glu Leu Arg
 130 135 140

Lys Val Ala His Leu Thr Gly Lys Ser Asn Ser Arg Ser Met Pro Leu
 145 150 155 160

Glu Trp Glu Asp Thr Tyr Gly Ile Val Leu Leu Ser Gly Val Lys Tyr
 165 170 175

Lys Lys Gly Gly Leu Val Ile Asn Glu Thr Gly Leu Tyr Phe Val Tyr
 180 185 190

Ser Lys Val Tyr Phe Arg Gly Gln Ser Cys Asn Asn Leu Pro Leu Ser
 195 200 205
 His Lys Val Tyr Met Arg Asn Ser Lys Tyr Pro Gln Asp Leu Val Met
 210 215 220
 Met Glu Gly Lys Met Met Ser Tyr Cys Thr Thr Gly Gln Met Trp Ala
 225 230 235 240
 Arg Ser Ser Tyr Leu Gly Ala Val Phe Asn Leu Thr Ser Ala Asp His
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 ttgccttaag aaaagagaag aaatgaaact gnaaggagtg tgtttccatc ctcccacgga 240
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 agtctgggtga ctttgtttcg atgtattcaa aatatgcctg aaacactacc caataattcc 180
 tgetattcag ctggcattgc aaaaactggna ggaaggagat gaactccaac ttgcaatacc 240
 aggggaaaaat gcacaattat cactgggatg gagatgttca catttttttg gtgccattga 300
 aactgctgtg acctncttac ancgatgct gttngctatt ttncctncct nttctntggg 360
 aacctcttag gaaggaagga ttcttaattg ggaaataacc caaaaaaann ttaaangggg 420
 angngnnana ngnggggngg ttnnnnnnnn gnnttttngg nntatntnt nntnggggnn 480
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<220>
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 ccgttcaggg tccagaagaa acagtcactc aagactgctt gcaactgntt gcagacagtg 180
 aaacaccaac tatacaaaaa ggctcccttc tgntgccaca tttgggcca ggaatggaga 240
 gatttcttcg tctggaaaca ttttgccaaa ctcttcagat actctttnct ctctgggaat 300
 caaaggaaaa tctctactta gattnacaca tttgttccca tgggtntctt aagttttaaa 360
 aggggagtgc ccttaggagg aaaaggggat aaatattggc caaggnactg gttantttnt 420
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<223> Description of Combined DNA/RNA Molecule: x =
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27

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<212> DNA

<213> Homo sapiens

<400> 11

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33

<210> 12

<211> 26

<212> DNA

<213> Homo sapiens

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26

<210> 13

<211> 33

<212> DNA

<213> Homo sapiens

<400> 13

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<213> Homo sapiens

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 ctggccagc 129

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 Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro
 20 25 30
 cgg aag gaa agc ccc tct gtc cga tcc tcc aaa gac gga aag ctg ctg 144
 Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu
 35 40 45
 gct gca acc ttg ctg ctg gca ctg ctg tct tgc tgc ctc acg gtg gtg 192
 Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
 50 55 60
 tct ttc tac cag gtg gcc gcc ctg caa ggg gac ctg gcc agc ctc cgg 240
 Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg
 65 70 75 80
 gca gag ctg cag ggc cac cac gcg gag aag ctg cca gca gga gca gga 288
 Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly

| | 85 | 16 90 | 95 | |
|--|-----|----------|-----|-----|
| gcc ccc aag gcc ggc ctg gag gaa gct cca gct gtc acc gcg gga ctg | | | | 336 |
| Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu | | | | |
| | 100 | 105 | 110 | |
| aaa atc ttt gaa cca cca gct cca gga gaa ggc aac tcc agt cag aac | | | | 384 |
| Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn | | | | |
| | 115 | 120 | 125 | |
| agc aga aat aag cgt gcc gtt cag ggt cca gaa gaa aca gga tct tac | | | | 432 |
| Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Gly Ser Tyr | | | | |
| | 130 | 135 | 140 | |
| aca ttt gtt cca tgg ctt ctc agc ttt aaa agg gga agt gcc cta gaa | | | | 480 |
| Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser Ala Leu Glu | | | | |
| | 145 | 150 | 155 | 160 |
| gaa aaa gag aat aaa ata ttg gtc aaa gaa act ggt tac ttt ttt ata | | | | 528 |
| Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr Phe Phe Ile | | | | |
| | 165 | 170 | 175 | |
| tat ggt cag gtt tta tat act gat aag acc tac gcc atg gga cat cta | | | | 576 |
| Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met Gly His Leu | | | | |
| | 180 | 185 | 190 | |
| att cag agg aag aag gtc cat gtc ttt ggg gat gaa ttg agt ctg gtg | | | | 624 |
| Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu Val | | | | |
| | 195 | 200 | 205 | |
| act ttg ttt cga tgt att caa aat atg cct gaa aca cta ccc aat aat | | | | 672 |
| Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu Pro Asn Asn | | | | |
| | 210 | 215 | 220 | |
| tcc tgc tat tca gct ggc att gca aaa ctg gaa gaa gga gat gaa ctc | | | | 720 |
| Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly Asp Glu Leu | | | | |
| | 225 | 230 | 235 | 240 |
| caa ctt gca ata cca aga gaa aat gca caa ata tca ctg gat gga gat | | | | 768 |
| Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu Asp Gly Asp | | | | |
| | 245 | 250 | 255 | |
| gtc aca ttt ttt ggt gca ttg aaa ctg ctg tgacctactt acaccatgtc | | | | 818 |
| Val Thr Phe Phe Gly Ala Leu Lys Leu Leu | | | | |
| | 260 | 265 | | |
| tgtagctatt ttctccctt tctctgtacc tctaagaaga aagaatctaa ctgaaaatac | | | | 878 |
| caaaaaaaaa aaaaaaaaa aaaaa | | | | 903 |

<210> 19
 <211> 266
 <212> PRT
 <213> Homo sapiens

<400> 19
 Met Asp Asp Ser Thr Glu Arg Glu Gln Ser Arg Leu Thr Ser Cys Leu
 1 5 10 15

~~Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro
20 25 30
Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu
35 40 45
Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
50 55 60
Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg
65 70 75 80
Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly
85 90 95
Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu
100 105 110
Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn
115 120 125
Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Gly Ser Tyr
130 135 140
Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser Ala Leu Glu
145 150 155 160
Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr Phe Phe Ile
165 170 175
Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met Gly His Leu
180 185 190
Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu Val
195 200 205
Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu Pro Asn Asn
210 215 220
Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly Asp Glu Leu
225 230 235 240
Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu Asp Gly Asp
245 250 255
Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
260 265~~

<210> 20

<211> 136

<212> PRT

<213> Homo sapiens

<400> 20

His Ser Val Leu His Leu Val Pro Ile Asn Ala Thr Ser Lys Asp Asp
1 5 10 15

Ser Asp Val Thr Glu Val Met Trp Gln Pro Ala Leu Arg Arg Gly Arg

20

25

30

Gly Leu Gln Ala Gln Gly Tyr Gly Val Arg Ile Gln Asp Ala Gly Val
 35 40 45
 Tyr Leu Leu Tyr Ser Gln Val Leu Phe Gln Asp Val Thr Phe Thr Met
 50 55 60
 Gly Gln Val Val Ser Arg Glu Gly Gln Gly Arg Gln Glu Thr Leu Phe
 65 70 75 80
 Arg Cys Ile Arg Ser Met Pro Ser His Pro Asp Arg Ala Tyr Asn Ser
 85 90 95
 Cys Tyr Ser Ala Gly Val Phe His Leu His Gln Gly Asp Ile Leu Ser
 100 105 110
 Val Ile Ile Pro Arg Ala Arg Ala Lys Leu Asn Leu Ser Pro His Gly
 115 120 125
 Thr Phe Leu Gly Phe Val Lys Leu
 130 135

<210> 21
 <211> 462
 <212> DNA
 <213> Homo sapiens

<400> 21
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 aaacgtgggt ctgccctgga agagaaagaa aacaaaatcc tggtaaaga aactgggttac 180
 ttctttatct acggtcagggt tctttacact gataagacct acgccatggg tcacctgatt 240
 cagcgtaaga aagttcacgt tttcgggtgac gagctgtctc tggttactct gtttcgctgc 300
 attcagaaca tgcgggaaac tcttcctaac aactcctgct actctgctgg catcgcaaaa 360
 ctggaagagg gtgatgaact gcagctggca attcctcgtg aaaacgcaca aatttctctg 420
 gacggtgatg taaccttctt tgggtgcactg aaacttctgt aa 462

<210> 22
 <211> 1040
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1) .. (468)

<400> 22
 cgc gtg gta gac ctc tca gct cct cct gca cca tgc ctg cct gga tgc 48
 Arg Val Val Asp Leu Ser Ala Pro Pro Ala Pro Cys Leu Pro Gly Cys
 1 5 10 15
 cgc cat tct caa cat gat gat aat gga atg aac ctc aga aac aga act 96
 Arg His Ser Gln His Asp Asp Asn Gly Met Asn Leu Arg Asn Arg Thr
 20 25 30
 tac aca ttt gtt cca tgg ctt ctc agc ttt aaa aga gga aat gcc ttg 144
 Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Asn Ala Leu

| 35 | 40 | 45 | |
|---|-----|-----|------|
| gag gag aaa gag aac aaa ata gtg gtg agg caa aca ggc tat ttc ttc | | | 192 |
| Glu Glu Lys Glu Asn Lys Ile Val Val Arg Gln Thr Gly Tyr Phe Phe | | | |
| 50 | 55 | 60 | |
| atc tac agc cag gtt cta tac acg gac ccc atc ttt gct atg ggt cat | | | 240 |
| Ile Tyr Ser Gln Val Leu Tyr Thr Asp Pro Ile Phe Ala Met Gly His | | | |
| 65 | 70 | 75 | 80 |
| gtc atc cag agg aag aaa gta cac gtc ttt ggg gac gag ctg agc ctg | | | 288 |
| Val Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu | | | |
| | 85 | 90 | 95 |
| gtg acc ctg ttc cga tgt att cag aat atg ccc aaa aca ctg ccc aac | | | 336 |
| Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Lys Thr Leu Pro Asn | | | |
| | 100 | 105 | 110 |
| aat tcc tgc tac tgc gct ggc atc gcg agg ctg gaa gaa gga gat gag | | | 384 |
| Asn Ser Cys Tyr Ser Ala Gly Ile Ala Arg Leu Glu Glu Gly Asp Glu | | | |
| | 115 | 120 | 125 |
| att cag ctt gca att cct cgg gag aat gca cag att tca cgc aac gga | | | 432 |
| Ile Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Arg Asn Gly | | | |
| | 130 | 135 | 140 |
| gac gac acc ttc ttt ggt gcc cta aaa ctg ctg taa ctcaattgct | | | 478 |
| Asp Asp Thr Phe Phe Gly Ala Leu Lys Leu Leu | | | |
| 145 | 150 | 155 | |
| ggagtgcgtg atcccccttcc ctcgctcttct ctgtacctcc gagggagaaa cagacgactg | | | 538 |
| gaaaaactaa aagatgggga aagccgtcag cgaaagtttt ctcgtagacc gttgaatctg | | | 598 |
| atccaaacca ggaaatataa cagacagcca caaccgaagt gtgccatgtg agttatgaga | | | 658 |
| aacggagccc gcgctcagaa agaccggatg aggaagaccg ttttctccag tcctttgcca | | | 718 |
| acacgcaccg caaccttgct ttttgcccttg ggtgacacat gttcagaatg cagggagatt | | | 778 |
| tccttggtttt gcgatttgcc atgagaagag ggcccacaac tgcaggtcac tgaagcattc | | | 838 |
| acgctaagtc tcaggattta ctctcccttc tcatgctaag tacacacacg ctcttttcca | | | 898 |
| ggtaatacta tgggatacta tggaaagggt gtttggtttt aaatctagaa gtcttgaact | | | 958 |
| ggcaatagac aaaaaatcctt ataaattcaa gtgtaaaata aacttaatta aaaagggtta | | | 1018 |
| agtgtgaaaa aaaaaaaaaa aa | | | 1040 |

<210> 23

<211> 155

<212> PRT

<213> Homo sapiens

<400> 23

Arg Val Val Asp Leu Ser Ala Pro Pro Ala Pro Cys Leu Pro Gly Cys

| | | | |
|---|-----|-----|----|
| 1 | 5 | 10 | 15 |
| Arg His Ser Gln His Asp Asp Asn Gly Met Asn Leu Arg Asn Arg Thr | | | |
| 20 | 25 | 30 | |
| Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Asn Ala Leu | | | |
| 35 | 40 | 45 | |
| Glu Glu Lys Glu Asn Lys Ile Val Val Arg Gln Thr Gly Tyr Phe Phe | | | |
| 50 | 55 | 60 | |
| Ile Tyr Ser Gln Val Leu Tyr Thr Asp Pro Ile Phe Ala Met Gly His | | | |
| 65 | 70 | 75 | 80 |
| Val Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu | | | |
| 85 | 90 | 95 | |
| Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Lys Thr Leu Pro Asn | | | |
| 100 | 105 | 110 | |
| Asn Ser Cys Tyr Ser Ala Gly Ile Ala Arg Leu Glu Glu Gly Asp Glu | | | |
| 115 | 120 | 125 | |
| Ile Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Arg Asn Gly | | | |
| 130 | 135 | 140 | |
| Asp Asp Thr Phe Phe Gly Ala Leu Lys Leu Leu | | | |
| 145 | 150 | 155 | |

<210> 24
 <211> 26
 <212> DNA
 <213> Homo sapiens

<400> 24
 ccaccagctc caggagaagg caactc 26

<210> 25
 <211> 19
 <212> DNA
 <213> Homo sapiens

<400> 25
 accgcgggac tgaaaatct 19

<210> 26
 <211> 23
 <212> DNA
 <213> Homo sapiens

<400> 26
 cacgcttatt tctgctgttc tga 23

<210> 27
 <211> 657
 <212> DNA
 <213> Homo sapiens

<400> 27
 taccaggtgg cggccgtgca aggggacctg gccagcctcc gggcagagct gcagggccac 60
 cacgcgagaga agctgccagc aagagcaaga gcccccaagg ccggtctggg ggaagctcca 120
 gctgtcaccg caggactgaa aatctttgaa ccaccagctc caggagaagg caactccagt 180
 cagagcagca gaaataagcg tgctattcag ggtgcagaag aaacagtcac tcaagactgc 240
 ttgcaactga ttgcagacag tgaaacacca actatacaaa aaggatctta cacatttggt 300

ccatggcttc tcagctttaaa aaggggaagt gccctagaag aaaaagagaa taaaatattg 360
 gtcaaagaaa ctggttactt ttttatatat ggtcagggtt tatacactga taagacctat 420
 gccatgggac atctaattca gaggaaaaaa gtccatgtct ttggggatga attgagtctg 480
 gtgactttgt ttcgatgtat tcaaaatatg cctgaaacac tacccaataa ttctgtctat 540
 tcagctggca ttgcaaaact ggaagaagga gatgaacttc aacttgcaat accacgagaa 600
 aatgcacaaa tatcactgga tggagatgtc acattttttg gtgcctcaa actgctg 657

<210> 28

<211> 219

<212> ERT

<213> Homo sapiens

<400> 28

Tyr Gln Val Ala Ala Val Gln Gly Asp Leu Ala Ser Leu Arg Ala Glu
 1 5 10 15

Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Arg Ala Arg Ala Pro
 20 25 30

Lys Ala Gly Leu Gly Glu Ala Pro Ala Val Thr Ala Gly Leu Lys Ile
 35 40 45

Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Ser Ser Arg
 50 55 60

Asn Lys Arg Ala Ile Gln Gly Ala Glu Glu Thr Val Ile Gln Asp Cys
 65 70 75 80

Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys Gly Ser
 85 90 95

Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser Ala Leu
 100 105 110

Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr Phe Phe
 115 120 125

Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met Gly His
 130 135 140

Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu
 145 150 155 160

Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu Pro Asn
 165 170 175

Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly Asp Glu
 180 185 190

Leu Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu Asp Gly
 195 200 205

Asp Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
 210 215

<210> 29

<211> 657

<212> DNA

<213> Homo sapiens

<400> 29

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taccaggtgg cggccgtgca aggggacctg gccagcctcc gggcagagct gcagagccac 60
caagcggaga agctgccagc aagagcaaga gcccacaagg ccggtctggg ggaagctcca 120
gctgtcaccg cgggactgaa aatctttgaa ccaccagctc caggagaagg caactccagt 180
cagagcagca gaaataagcg tgctattcag ggtgcagaag aaacagtcac tcaagactgc 240
ttgcaactga ttgcagacag tgaaacacca actatacaaa aaggatctta cacatttggt 300
ccatgggttc tcagctttta aaggggaagt gccctagaag aaaaagagaa taaaatattg 360
gtcaaagaaa ctggttactt ttttatatat ggtcagggtt tatacactga taagacctat 420
gccatgggac atctaattca gaggaaaaaa gtccatgtct ttggggatga attgagtctg 480
gtgactttgt ttgatgtat tcaaaatatg cctgaaacac tacccaataa ttctgtctat 540
tcagctggca ttgcaaaact ggaagaaggg gatgaacttc aacttgcaat accacgagaa 600
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<210> 30

<211> 219

<212> PRT

<213> Homo sapiens

<400> 30

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Tyr Gln Val Ala Ala Val Gln Gly Asp Leu Ala Ser Leu Arg Ala Glu
  1           5           10           15
Leu Gln Ser His His Ala Glu Lys Leu Pro Ala Arg Ala Arg Ala Pro
          20           25           30
Lys Ala Gly Leu Gly Glu Ala Pro Ala Val Thr Ala Gly Leu Lys Ile
          35           40           45
Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Ser Ser Arg
          50           55           60
Asn Lys Arg Ala Ile Gln Gly Ala Glu Glu Thr Val Ile Gln Asp Cys
          65           70           75           80
Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys Gly Ser
          85           90           95
Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser Ala Leu
          100          105          110
Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr Phe Phe
          115          120          125
Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met Gly His
          130          135          140
Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu
          145          150          155          160
Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu Pro Asn
          165          170          175
Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly Asp Glu
          180          185          190
Leu Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu Asp Gly
          195          200          205

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Asp Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
 210 215

<210> 31
 <211> 38
 <212> DNA
 <213> Homo sapiens

<400> 31
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38

<210> 32
 <211> 49
 <212> DNA
 <213> Homo sapiens

<400> 32
 ctgggttcggc ccaaggtacc aagcttgtac cttagatctt ttctagatc

49

<210> 33
 <211> 21
 <212> DNA
 <213> Homo sapiens

<400> 33
 ctggtagttc ttcggagtgt g

21

<210> 34
 <211> 19
 <212> DNA
 <213> Homo sapiens

<400> 34
 cgcgtagaa acggcgacc

19

<210> 35
 <211> 22
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (7)
 <223> n equals deoxyinosine

<220>
 <221> misc_feature
 <222> (12)
 <223> n equals deoxyinosine

<220>
 <221> misc_feature
 <222> (16)
 <223> n equals deoxyinosine

<400> 35
taccagntgg cngccntgca ag

22

<210> 36
<211> 22
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (3)
<223> n equals deoxyinosine

<220>
<221> misc_feature
<222> (14)
<223> n equals deoxyinosine

<220>
<221> misc_feature
<222> (16)..(17)
<223> n equals deoxyinosine

<400> 36
gtnacagcag tttnanngca cc

22

<210> 37
<211> 866
<212> DNA
<213> Mus musculus

<400> 37
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gaagatatga aagtgggata tgatcccatc actccgcaga aggaggaggg tgcttggttt 120
gggatctgca gggatggaag gctgctggct gctaccctcc tgctggccct gttgtccagc 180
agtttcacag cgatgtcctt gtaccagttg gctgccttgc aagcagacct gatgaacctg 240
cgcatggagc tgcagagcta ccgaggttca gcaacaccag ccgccgcggg tgctccagag 300
ttgaccgctg gagtcaaaact cctgacaccg gcagctcctc gacccacaaa ctccagccgc 360
ggccacagga acagacgcgc cttccaggga ccagaggaaa cagaacaaga tgtagacctc 420
tcagctcctc ctgcaccatg cctgcctgga tgccgcatt ctcaacatga tgataatgga 480
atgaacctca gaaacatcat tcaagactgt ctgcagctga ttgcagacag cgacacgccg 540
gccttggagg agaaagagaa caaaatagtg gtgaggcaaa caggctatatt cttcatctac 600
agccaggttc tatacacgga ccccatcttt gctatgggtc atgtcatcca gaggaagaaa 660
gtacacgtct ttggggacga gctgagcctg gtgaccctgt tccgatgtat tcagaatatg 720
cccaaaacac tgcccaacaa ttcttgctac tcggctggca tcgcgaggct ggaagaagga 780
gatgagattc agcttgcaat tcctcgggag aatgcacaga ttccacgcaa cggagacgac 840
accttctttg gtgcctctaaa actgct 866

<210> 38
<211> 177
<212> PRT
<213> Mus musculus

<400> 38
Met Asp Ser Ala Lys Thr Cys Cys Cys Ser Lys Gly Asp Met Lys Val
1 5 10 15

